WEST Search History

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DATE: Saturday, May 15, 2004

Hide?	Set Name	Query	Hit Count
	DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ		
☐	L11	copetrolisation	0
☐	L10	copetrolisation or copetrolization	0
☐	L9	crush$3 iron same crush$3 salt	0
☐	L8	L7 and fischer tropsch	2
☐	L7	L6 and (synthesis gas or hydrogen near4 carbon monoxide)	73
☐	L6	iron same sodium chloride	8298
☐	L5	L4 and heptane	3
☐	L4	L2 and hydrocarbon	22
☐	L3	L2 and fischer tropsch	0
☐	L2	L1 and (synthesis gas or hydrogen near4 carbon monoxide)	36
☐	L1	iron with (sodium chloride or NaCl)	3634

END OF SEARCH HISTORY

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NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	JAN 27	Source of Registration (SR) information in REGISTRY updated and searchable
NEWS	4	JAN 27	A new search aid, the Company Name Thesaurus, available in CA/CAplus
NEWS	5	FEB 05	German (DE) application and patent publication number format changes
NEWS	6	MAR 03	MEDLINE and LMEDLINE reloaded
NEWS	7	MAR 03	MEDLINE file segment of TOXCENTER reloaded
NEWS	8	MAR 03	FRANCEPAT now available on STN
NEWS	9	MAR 29	Pharmaceutical Substances (PS) now available on STN
NEWS	10	MAR 29	WPIFV now available on STN
NEWS	11	MAR 29	New monthly current-awareness alert (SDI) frequency in RAPRA
NEWS	12	APR 26	PROMT: New display field available
NEWS	13	APR 26	IFIPAT/IFIUDB/IFICDB: New super search and display field available
NEWS	14	APR 26	LITALERT now available on STN
NEWS	15	APR 27	NLDB: New search and display fields available
NEWS	16	May 10	PROUSDDR now available on STN
NEWS	17	May 19	PROUSDDR: One FREE connect hour, per account, in both May and June 2004
NEWS	18	May 12	EXTEND option available in structure searching
NEWS	19	May 12	Polymer links for the POLYLINK command completed in REGISTRY

NEWS EXPRESS	MARCH 31 CURRENT WINDOWS VERSION IS V7.00A, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 26 APRIL 2004
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=> file caplus

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                                                           ENTRY     SESSION
FULL ESTIMATED COST                                         0.21       0.21

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FILE COVERS 1907 - 15 May 2004  VOL 140 ISS 21
FILE LAST UPDATED: 14 May 2004  (20040514/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.


=> s gagnon R?/au
L1          259 GAGNON R?/AU

=> e Gagnon Robert/au
E1            3     GAGNON RICHARD N/AU
E2            1     GAGNON RICHARD NORMAN/AU
E3           24 --> GAGNON ROBERT/AU
E4            9     GAGNON ROBERT C/AU
E5            2     GAGNON ROBERT E/AU
E6            1     GAGNON ROBERT EGIDE/AU
E7            1     GAGNON ROBERT L/AU
E8            2     GAGNON RODOLPHE A/AU
E9            1     GAGNON ROGER A/AU
E10           8     GAGNON ROLAND K/AU
E11           1     GAGNON ROMAIN/AU
E12           1     GAGNON ROY/AU

=> s e3
L2           24 "GAGNON ROBERT"/AU

=> s l2 and Fischer tropsch
          21547 FISCHER
             15 FISCHERS
          21559 FISCHER
                   (FISCHER OR FISCHERS)
           6878 TROPSCH
           6785 FISCHER TROPSCH
                   (FISCHER(W)TROPSCH)
L3            0 L2 AND FISCHER TROPSCH

=> s l1 and fischer tropsch
          21547 FISCHER
             15 FISCHERS
          21559 FISCHER
                   (FISCHER OR FISCHERS)
           6878 TROPSCH
           6785 FISCHER TROPSCH
```

```
                (FISCHER(W)TROPSCH)
L4          0 L1 AND FISCHER TROPSCH

=> s l2 and copetrolisation
            0 COPETROLISATION
L5          0 L2 AND COPETROLISATION

=> s l1 and copetrolisation
            0 COPETROLISATION
L6          0 L1 AND COPETROLISATION

=> s l1 and petroleum
       275066 PETROLEUM
         5962 PETROLEUMS
       275433 PETROLEUM
                (PETROLEUM OR PETROLEUMS)
L7          1 L1 AND PETROLEUM

=> d l7 ibib ab

L7   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2004:3709  CAPLUS
DOCUMENT NUMBER:          140:44551
TITLE:                    How to produce crude petroleum from organic
                          wastes by a process called petrolization
INVENTOR(S):              Gagnon, Robert
PATENT ASSIGNEE(S):       Can.
SOURCE:                   U.S. Pat. Appl. Publ., 3 pp.
                          CODEN: USXXCO
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
     US 2004002622      A1   20040101       US 2003-379522   20030306
PRIORITY APPLN. INFO.:                   CA 2002-2389950  A  20020628
AB   Synthetic crude petroleum is made from carbon compds. and/or
     organic wastes using a hydrogenation process with two naturally-occurring
     catalysts instead of one or many costly industrial catalysts.  The
     synthetic crude oil is deoxidized using sulfuric acid.  The process
     recreates the natural conditions of petroleum formation as they
     existed millions of years ago.  Using FeO and NaCl catalysts, conversion
     of heterogeneous organic wastes is cost effective because production efficiency
     of synthetic crude is improved by >50%.


=> s l1 and carbon monoxide
       1054434 CARBON
         23482 CARBONS
       1062994 CARBON
                (CARBON OR CARBONS)
        158362 MONOXIDE
           955 MONOXIDES
        158869 MONOXIDE
                (MONOXIDE OR MONOXIDES)
        133822 CARBON MONOXIDE
                (CARBON(W)MONOXIDE)
L8          1 L1 AND CARBON MONOXIDE

=> s l8 not l7
L9          1 L8 NOT L7
```

```
=> d l9 ibib ab

L9   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         1979:212475  CAPLUS
DOCUMENT NUMBER:          90:212475
TITLE:                    Determination of the refractive index of liquid
                          carbon monoxide
AUTHOR(S):                Gagnon, R. E.; Gammon, P. H.; Kiefte, H.;
                          Clouter, M. J.
CORPORATE SOURCE:         Phys. Dep., Memorial Univ. Newfoundland, St. John's,
                          NF, Can.
SOURCE:                   Applied Optics (1979), 18(8), 1237-9
                          CODEN: APOPAI; ISSN: 0003-6935
DOCUMENT TYPE:            Journal
LANGUAGE:                 English
AB   The refractive index of liquid CO at 78.3 ± 0.5 K was measured by means
     of a relatively simple interferometric technique.  The values obtained
     were n = 1.2122 for λ = 632.8 nm and n = 1.2213 for λ =
     514.5 nm with 0.2% uncertainty.


=> s l1 and catalytic hydrogenat?
        364236 CATALYTIC
            26 CATALYTICS
        364245 CATALYTIC
                  (CATALYTIC OR CATALYTICS)
        254162 HYDROGENAT?
         20947 CATALYTIC HYDROGENAT?
                  (CATALYTIC(W)HYDROGENAT?)
L10           0 L1 AND CATALYTIC HYDROGENAT?

=> s l1 and fischer
         21547 FISCHER
            15 FISCHERS
         21559 FISCHER
                  (FISCHER OR FISCHERS)
L11           0 L1 AND FISCHER

=> s l1 and fuel
        332098 FUEL
        152928 FUELS
        380422 FUEL
                  (FUEL OR FUELS)
L12           4 L1 AND FUEL

=> s l12 not l8 not l7
L13           4 L12 NOT L8 NOT L7

=> d l13 ibib ab 1-4

L13  ANSWER 1 OF 4  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         1979:8918  CAPLUS
DOCUMENT NUMBER:          90:8918
TITLE:                    Fuel cell fuel control system
INVENTOR(S):              Gagnon, Richard N.
PATENT ASSIGNEE(S):       United Technologies Corp., USA
SOURCE:                   U.S., 8 pp.
                          CODEN: USXXAM
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   2
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
```

US 4098960	A	19780704	US 1976-754325	19761227
CA 1076641	A1	19800429	CA 1977-291368	19771121
GB 1544312	A	19790419	GB 1977-50040	19771201
IL 53513	A1	19820228	IL 1977-53513	19771202
JP 53081923	A2	19780719	JP 1977-150428	19771214
JP 59023066	B4	19840530		
DE 2756651	A1	19780629	DE 1977-2756651	19771219
DE 2756651	C2	19861030		
FR 2375729	A1	19780721	FR 1977-38190	19771219
FR 2375729	B1	19841207		

PRIORITY APPLN. INFO.: US 1976-754325 19761227

AB A **fuel**-cell **fuel** control system is presented in which the **fuel** processor is isolated from the **fuel** cell by a demand valve. The **fuel** processor operates at an elevated pressure with the supply of **fuel**-forming constituents being constantly monitored in proportion to the demand based on the pressure downstream of the demand valve and the temperature in the H reformer.

L13 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1978:566167 CAPLUS
DOCUMENT NUMBER: 89:166167
TITLE: Apparatus for producing electricity by electrochemical reaction
INVENTOR(S): **Gagnon, Richard Norman**
PATENT ASSIGNEE(S): United Technologies Corp., USA
SOURCE: Ger. Offen., 27 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2756651	A1	19780629	DE 1977-2756651	19771219
DE 2756651	C2	19861030		
US 4098960	A	19780704	US 1976-754325	19761227

PRIORITY APPLN. INFO.: US 1976-754325 19761227

AB A **fuel** cell power plant comprises ≥1 **fuel** cells and ≥1 **fuel** processing-conditioning units, the **fuel** cells and **fuel** processing units being connected via pressure control valves. Various embodiments of the plant are illustrated.

L13 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1973:472957 CAPLUS
DOCUMENT NUMBER: 79:72957
TITLE: Proportional-action electronic **fuel** control for **fuel** cells
INVENTOR(S): Fanciullo, Salvatore; **Gagnon, Richard N.**; Summers, Warren S.
PATENT ASSIGNEE(S): United Aircraft Corp.
SOURCE: U.S., 7 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3745047	A	19730710	US 1970-103246	19701231
CA 964719	A1	19750318	CA 1971-121065	19710820

AU 7134020	A1	19730405	AU 1971-34020	19710929
BR 7107297	A0	19730417	BR 1971-7297	19711029
FR 2119949	A5	19720811	FR 1971-43170	19711115
FR 2119949	B1	19751003		
SE 396661	B	19770926	SE 1971-14701	19711117
CH 543816	A	19731214	CH 1971-16768	19711118
DE 2157722	C2	19820701	DE 1971-2157722	19711120
JP 58034909	B4	19830729	JP 1972-4111	19711228
IT 944565	A	19730420	IT 1971-33118	19711230

PRIORITY APPLN. INFO.: US 1970-103246 19701231

AB A device is described for controlling the feed flow of **fuel** to the reformer of a **fuel** cell system in response to **fuel** cell current, reformer temperature and the position of the flow control valve. The electronic control produces a proportional control signal which actuates solenoids in a digital manner to regulate the position of the flow control valve. A deadband is provided in the electronic control to prevent continuous cycling of the control valve. The novel features of the control are the use of elec. circuits to provide proportional action and digital, on-off, techniques. The feedback gains in the electronic portion of the **fuel** control are easily adjusted, making the control adaptable to various applications. Electronics lends itself easily to miniaturization, because the circuits may be produced on a hybrid integrated circuit chip. The electronic portions of the circuits can be located remote from the temperature from the **fuel** cell. Specific circuit components have not been disclosed because design of individual circuits will depend on specific size and power levels in the **fuel** cell and the temperature involved, the desired speed of response of the system, and other specific characteristics.

L13 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1973:131421 CAPLUS
DOCUMENT NUMBER: 78:131421
TITLE: **Fuel** cell electrolyte concentration control
INVENTOR(S): **Gagnon, Richard N.**; Banic, Carl V.; Grasso, Albert P.
PATENT ASSIGNEE(S): United Aircraft Corp.
SOURCE: U.S., 5 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3716415	A	19730213	US 1971-128775	19710329

PRIORITY APPLN. INFO.: US 1971-128775 19710329

AB A **fuel** cell electrolyte concentration control is provided by well bulb and dry bulb temperature sensors disposed downstream of a **fuel** cell in a reactant gas recirculation conduit. Excess electrolyte diluent removal means are provided and are controlled by control means as a function of the difference between the sensed dry bulb and wet bulb temperature The gas recirculation outlet and inlet are connected by means of conduits and may include an ejector for recirculating the reactant gas flow. The ejector is powered by high pressure reactant gas which is fed to the priamry nozzle of the ejector and the recirculating reactant gas is fed to the secondary nozzle of the ejector A pressure regulating valve may be provided to regulate the pressure of the incoming reactant gas. It is not necessary to utilize an ejector to recirculate the reactant gas; a pump or fan could be used instead. Wet bulb and dry bulb sensing temperature means are disposed in the conduit downstream of the temperature sensor. Controls connect the temperature sensor to the valve. The control may be either of a proportional type or an on-off type.

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NEWS	19	May 12	Polymer links for the POLYLINK command completed in REGISTRY

NEWS EXPRESS	MARCH 31 CURRENT WINDOWS VERSION IS V7.00A, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 26 APRIL 2004
NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS INTER	General Internet Information
NEWS LOGIN	Welcome Banner and News Items
NEWS PHONE	Direct Dial and Telecommunication Network Access to STN
NEWS WWW	CAS World Wide Web Site (general information)

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FILE COVERS 1907 - 15 May 2004 VOL 140 ISS 21
FILE LAST UPDATED: 14 May 2004 (20040514/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> s ca 360194/pn
L1            0 CA 360194/PN
                (CA360194/PN)

=> s ca 411979/pn
L2            0 CA 411979/PN
                (CA411979/PN)

=> s ca 556715/pn
L3            0 CA 556715/PN
                (CA556715/PN)

=> s ca 559476/pn
L4            0 CA 559476/PN
                (CA559476/PN)

=> s synthesis gas or (hydrogen (1a) carbon monoxide)
       1120506 SYNTHESIS
             3 SYNTHESISES
         61622 SYNTHESES
       1155482 SYNTHESIS
                 (SYNTHESIS OR SYNTHESISES OR SYNTHESES)
       1357367 GAS
        468297 GASES
       1525567 GAS
                 (GAS OR GASES)
         14406 SYNTHESIS GAS
                 (SYNTHESIS(W)GAS)
        819312 HYDROGEN
          5358 HYDROGENS
        822323 HYDROGEN
                 (HYDROGEN OR HYDROGENS)
       1054434 CARBON
         23482 CARBONS
       1062994 CARBON
                 (CARBON OR CARBONS)
        158362 MONOXIDE
```

```
          955 MONOXIDES
       158869 MONOXIDE
                (MONOXIDE OR MONOXIDES)
       133822 CARBON MONOXIDE
                (CARBON(W)MONOXIDE)
         9260 HYDROGEN (1A) CARBON MONOXIDE
L5       22659 SYNTHESIS GAS OR (HYDROGEN (1A) CARBON MONOXIDE)

=> s l5 and (iron or iron oxide or FeO) and (sodium chloride or salt)
       883721 IRON
        11100 IRONS
       884489 IRON
                (IRON OR IRONS)
       883721 IRON
        11100 IRONS
       884489 IRON
                (IRON OR IRONS)
      1470819 OXIDE
       314444 OXIDES
      1561238 OXIDE
                (OXIDE OR OXIDES)
        84653 IRON OXIDE
                (IRON(W)OXIDE)
        33958 FEO
           12 FEOS
        33967 FEO
                (FEO OR FEOS)
       929114 SODIUM
           34 SODIUMS
       929123 SODIUM
                (SODIUM OR SODIUMS)
       987885 CHLORIDE
       148490 CHLORIDES
      1055471 CHLORIDE
                (CHLORIDE OR CHLORIDES)
       111516 SODIUM CHLORIDE
                (SODIUM(W)CHLORIDE)
       712868 SALT
       557170 SALTS
      1063438 SALT
                (SALT OR SALTS)
L6         104 L5 AND (IRON OR IRON OXIDE OR FEO) AND (SODIUM CHLORIDE OR SALT)

=> s l6 and hydrocarbon
       306841 HYDROCARBON
       305983 HYDROCARBONS
       471600 HYDROCARBON
                (HYDROCARBON OR HYDROCARBONS)
L7          46 L6 AND HYDROCARBON

=> s l7 and hydrogenation
       163478 HYDROGENATION
         2045 HYDROGENATIONS
       163681 HYDROGENATION
                (HYDROGENATION OR HYDROGENATIONS)
L8          26 L7 AND HYDROGENATION

=> s l7 and fischer tropsch
        21547 FISCHER
           15 FISCHERS
        21559 FISCHER
                (FISCHER OR FISCHERS)
         6878 TROPSCH
         6785 FISCHER TROPSCH
```

```
                (FISCHER(W)TROPSCH)
L9          16 L7 AND FISCHER TROPSCH

=> s iron-salt catalyst
        883721 IRON
         11100 IRONS
        884489 IRON
                (IRON OR IRONS)
        712868 SALT
        557170 SALTS
       1063438 SALT
                (SALT OR SALTS)
        655880 CATALYST
        660254 CATALYSTS
        840237 CATALYST
                (CATALYST OR CATALYSTS)
L10        312 IRON-SALT CATALYST
                (IRON(W)SALT(W)CATALYST)

=> s l10 and fischer-Tropsch
         21547 FISCHER
            15 FISCHERS
         21559 FISCHER
                (FISCHER OR FISCHERS)
          6878 TROPSCH
          6785 FISCHER-TROPSCH
                (FISCHER(W)TROPSCH)
L11           0 L10 AND FISCHER-TROPSCH

=> s l10 and synthesis gas
       1120506 SYNTHESIS
             3 SYNTHESISES
         61622 SYNTHESES
       1155482 SYNTHESIS
                (SYNTHESIS OR SYNTHESISES OR SYNTHESES)
       1357367 GAS
        468297 GASES
       1525567 GAS
                (GAS OR GASES)
         14406 SYNTHESIS GAS
                (SYNTHESIS(W)GAS)
L12           0 L10 AND SYNTHESIS GAS

=> d his

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     FILE 'CAPLUS' ENTERED AT 16:41:22 ON 15 MAY 2004
L1            0 S CA 360194/PN
L2            0 S CA 411979/PN
L3            0 S CA 556715/PN
L4            0 S CA 559476/PN
L5        22659 S SYNTHESIS GAS OR (HYDROGEN (1A) CARBON MONOXIDE)
L6          104 S L5 AND (IRON OR IRON OXIDE OR FEO) AND (SODIUM CHLORIDE OR SA
L7           46 S L6 AND HYDROCARBON
L8           26 S L7 AND HYDROGENATION
L9           16 S L7 AND FISCHER TROPSCH
L10         312 S IRON-SALT CATALYST
L11           0 S L10 AND FISCHER-TROPSCH
L12           0 S L10 AND SYNTHESIS GAS

=> s l10 and heptane
         55698 HEPTANE
          1157 HEPTANES
```

```
         56301 HEPTANE
                 (HEPTANE OR HEPTANES)
L13          3 L10 AND HEPTANE

=> s l10 and hydrocarbon synthesis
        306841 HYDROCARBON
        305983 HYDROCARBONS
        471600 HYDROCARBON
                 (HYDROCARBON OR HYDROCARBONS)
       1120506 SYNTHESIS
             3 SYNTHESISES
         61622 SYNTHESES
       1155482 SYNTHESIS
                 (SYNTHESIS OR SYNTHESISES OR SYNTHESES)
          1937 HYDROCARBON SYNTHESIS
                 (HYDROCARBON(W)SYNTHESIS)
L14          0 L10 AND HYDROCARBON SYNTHESIS

=> d l13 ibib ab 1-3

L13  ANSWER 1 OF 3  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         1963:461508  CAPLUS
DOCUMENT NUMBER:          59:61508
ORIGINAL REFERENCE NO.:   59:11249c-d
TITLE:                    Telomers
INVENTOR(S):              Takahashi, Akira; Mogi, Noboru; Takahama, Hiroshi
PATENT ASSIGNEE(S):       Showa Denko K. K.
SOURCE:                   7 pp.
DOCUMENT TYPE:            Patent
LANGUAGE:                 Unavailable
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
     JP 37018389             19621128       JP               19610301
     US 3213149              1965           US
AB   Telomers were prepared by the reaction of ethylene or vinyl compds. and
     telogens in the presence of amines and heavy metal salts of organic acids.
     Thus, 476 parts CCl4, 1.65 parts triethanolamine, and iron naphthenate
     (containing 0.034 part Fe) in an autoclave under N was kept at 50 atmospheric
     ethylene for 4 hrs. at 70°, cooled, ethylene and CCl4 evaporated, and
     the telomer obtained in 214 parts yield; it gave 5 fractions of
     Cl(CH2CH2)nCCl3 (% yield, n, b.p. given): 8.2, 1, b24 58-61°; 53.2,
     2, b24 111-13°; 22.3, 3, b2 92-4°; 10.3, 4, b2
     120-4°; 6.0, ≥5, --).

L13  ANSWER 2 OF 3  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         1963:461505  CAPLUS
DOCUMENT NUMBER:          59:61505
ORIGINAL REFERENCE NO.:   59:11248d-h
TITLE:                    Addition compounds of alkenes with chloroform
PATENT ASSIGNEE(S):       Meir Asscher, Aharon Katchalsky, and David Vofsi
SOURCE:                   12 pp.
DOCUMENT TYPE:            Patent
LANGUAGE:                 Unavailable
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
     BE 622938               19630115       BE
PRIORITY APPLN. INFO.:                  IL                  19610928
AB   CHCl2CHRCHZR1 (I) and CHCl2CHRCR1: CR2CHZR3 (II) [R, R1, R2, R3, H, alkyl,
     aryl, arylalkyl; Z, Cl, alkoxyl, useful intermediates for the preparation of
     perfumes, were prepared by reaction of CHCl3 with an alkene, arylalkene, or
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alkanediene in the presence of halogen transferring agents (as Cu or Fe salts in the one or other state of their valency) under addition of an amine hydrochloride to give excess Cl ions in ratio to the metal ions; the process is improved by addition of a reducing agent (e.g. benzoin, a sulfite) to hold at least a part of the halogen transferring agent in its lower valence during the reaction. Thus, 11.2 g. 1-octene, 36 g. CHCl3, 0.5 g. FeCl3.6H2O, 0.5 g. Me2NH.HCl, and 15 g. MeOH heated 22 hrs. at 142° in a closed apparatus, cooled, the mixture washed with N HCl and H2O, and the solution distilled gave 80% I (R = H, R1 = n-C6H13, Z = Cl), b10 71-81°. Butadiene (8.1 g.) was dissolved in a solution of 0.318 g. benzoin in 54 g. CHCl3, a solution of 0.405 g. FeCl3.6H2O and 0.246 g. Et2NH.HCl in 10 g. MeCN added, the mixture heated 16 hrs. at 130° in a Carius tube in which the air is replaced by butadiene, cooled (ice-salt), washed (0.1N HCl), and distilled to give 9.3 g. of a fraction, b25 100-40°, containing 90%II(R = R1 = R2 = R3 = H, Z = Cl) and6.8g. of a fraction, b0.0606 85-135°, containing a compound C9H13Cl3. Similarly, optionally in the presence of benzoin and (or) Et2NH.HCl, the following I were prepared (R, R1, Z, b.p./mm., and n25D given): H, C6H13, Cl, 90°/0.5, 1.4635; H, Et, Cl, 75°/25, 1.4619; Me, Me, Cl, 76°/25, 1.4683; H, Ph, Cl, 62°/0.1, --; H, Ph, MeO, 76°/0.3, 1.5192. Also the following II were prepared (R, R1, R2, R3, Z, b.p./mm., and n25D given): H, H, H, H, MeO, 105°/20, 1.4792; H, H, H, H, Cl, 100°/25, 1.4969. Belg. 622,939; 17 pp. Addition compds. of CCl4 with substituted hydrocarbons (containing at least one nonaromatic double bond or a pair of conjugated double bonds) were prepared to give useful intermediates for the preparation of insecticides and pharmaceuticals; in the case of rubber a highly chlorinated product was obtained. The following compds. were prepared (product, b.p./mm., and n25D given): PhCHClCH2CCl3, 84°/0.1, 1.5523; PhCH(OMe)CH2CCl3, 80°/1.5, 1.5280; CCl3CH2CH:CHCH2Cl, 110°/25, 1.5042 (by-product was tetrachlorononadiene, b0.08 50-130°); CCl3CH2CH:CHCH2OMe, 103°/20, 1.4792; CCl3CH2CHClCN, 111°/25, 1.4931; CCl3CH2CHClCO2Me, 111°/20, 1.4819; CCl3CH2CHClCH2OH, 66°/1.0, 1.5066; a mixture (prepared from H2C:CH2) containing CH2ClCH3CCl3, CH2Cl(CH2)3CCl3, and CH2Cl(CH2)5CCl3, in 39:50:11 weight-% ratio, 60-152°/20, --; CCl3CH2CHClEt, 87°/25, 1.4779; MeCHClCH(CCl3)Me, 93°/25, 1.4869; CCl3CH2CHClC6H13, 70°/0.8, 1.4749; a brown-gray powder containing 49.54% Cl and prepared from a solution containing 5% latex of natural rubber, --, --; Me(CH2)5CHClCH2CCl3, 87-95°/0.3, 1.4746.

L13 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1958:113042 CAPLUS
DOCUMENT NUMBER: 52:113042
ORIGINAL REFERENCE NO.: 52:19905d-e
TITLE: Autoxidation of n-**heptane** and the isomeric n-**heptane** hydroperoxides
AUTHOR(S): Pritzkow, Wilhelm; Muller, Karl Adolf
SOURCE: Ann (1955), 597, 167-81
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB All the isomers of n-**heptane** hydroperoxide were prepared in pure form, and compared to the peroxides obtained from the autoxidation of n-**heptane** at 130°/2.5-3 atmospheric The 4 isomeric peroxides (30 g. in 300 cc. **heptane**) were allowed to decompose in sealed tubes for 50 hrs. in the presence of catalytic amts. (100 mg.) of heavy metal laurates. The rates of catalysis were Co = Mn > Cu » Ni > Fe = Zn; Co and Mn salts facilitated virtually complete decomposition in 30 min. Analysis of the resulting ketones showed that O attacks n-**heptane** statistically. This was also shown for n-decane and n-dodecane. It was concluded that statistical substitution in n-paraffins occurs in oxidation as well as in chlorination (Asinger, C.A. 36, 61366), sulfonation (A., C.A. 39, 32501), and nitration (A., C.A. 39, 9065).

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=> d his

     (FILE 'HOME' ENTERED AT 16:41:08 ON 15 MAY 2004)

     FILE 'CAPLUS' ENTERED AT 16:41:22 ON 15 MAY 2004
L1             0 S CA 360194/PN
L2             0 S CA 411979/PN
L3             0 S CA 556715/PN
L4             0 S CA 559476/PN
L5         22659 S SYNTHESIS GAS OR (HYDROGEN (1A) CARBON MONOXIDE)
L6           104 S L5 AND (IRON OR IRON OXIDE OR FEO) AND (SODIUM CHLORIDE OR SA
L7            46 S L6 AND HYDROCARBON
L8            26 S L7 AND HYDROGENATION
L9            16 S L7 AND FISCHER TROPSCH
L10          312 S IRON-SALT CATALYST
L11            0 S L10 AND FISCHER-TROPSCH
L12            0 S L10 AND SYNTHESIS GAS
L13            3 S L10 AND HEPTANE
L14            0 S L10 AND HYDROCARBON SYNTHESIS

=> s l8 or l9
L15           29 L8 OR L9

=> s l15 and iron (1a)salt
         883721 IRON
          11100 IRONS
         884489 IRON
                  (IRON OR IRONS)
         712868 SALT
         557170 SALTS
        1063438 SALT
                  (SALT OR SALTS)
           8636 IRON (1A)SALT
L16            2 L15 AND IRON (1A)SALT

=> d l16 ibib ab 1-2

L16  ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         1985:169348  CAPLUS
DOCUMENT NUMBER:          102:169348
TITLE:                    Syngas [synthesis gas] conversion
                          to light olefins over magnetite catalysts prepared
                          from various iron salts
AUTHOR(S):                Okabe, Kiyomi; Sano, Tsuneji; Yanagisawa, Hiroshi;
                          Hagiwara, Hiroyuki; Araki, Michio; Shimomura, Kinya;
                          Ogawa, Kiyoshi; Hosoya, Tadasuke; Takaya, Haruo;
                          Bandoh, Kenichiro
CORPORATE SOURCE:         Natl. Chem. Lab. Ind., Yatabe, 305, Japan
SOURCE:                   Sekiyu Gakkaishi (1985), 28(2), 176-9
                          CODEN: SKGSAE; ISSN: 0582-4664
DOCUMENT TYPE:            Journal
LANGUAGE:                 Japanese
AB   Magnetite catalysts for fixed-bed hydrogenation of CO to C2-4
     olefins (at 325° and 10 atmospheric) were prepared from FeSO4, FeCl2, FeCl3,
     and Fe oxalate and analyzed by x-ray diffraction (XRD) and fluorescence
     spectroscopy.  The selectivity for formation of C2-4 olefins by catalysts
     prepared from the chlorides and sulfate or oxalate were 33-36% with low CO2
     formation and 22-23% with high CO2 formation, resp.  Low CO conversion was
     observed on a catalyst prepared by NH3 copptn. of sulfate.  Although CH4
     [74-82-8] formation was 6% on a K-impregnated Fe3O4, the selectivity to
     C2-4 olefins was 26% with a high selectivity for C6+ hydrocarbons
     .  The crystallite sizes of the catalysts prepared by copptn. with NH3 were
     estimated at 200 Å by XRD; these catalysts were turned into metallic Fe
     and Fe carbides during the reaction.  The Cl content in the used catalyst
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prepared from chlorides were 0.002-0.01:1 Cl-Fe (weight ratio); the S content in the catalyst prepared by copptn. was S-Fe (weight ratio) 0.01:1. Small particle-size magnetite and a small amount of Cl was preferable.

L16 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1969:37059 CAPLUS
DOCUMENT NUMBER: 70:37059
TITLE: **Hydrogenation** polymerization of carbon monoxide by gas-liquid-solid fluidized bed. VI. Distribution of **hydrocarbons** produced by liquid phase hydropolymerization of carbon monoxide using **iron oxide** catalyst
AUTHOR(S): Kunugi, Taiseki; Sakai, Tomoya; Negishi, Naoki
CORPORATE SOURCE: Univ. Tokyo, Tokyo, Japan
SOURCE: Sekiyu Gakkaishi (1968), 11(8), 636-41
CODEN: SKGSAE; ISSN: 0582-4664
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
AB The **Fischer-Tropsch** synthesis for production of straight chain α-olefins by Koelbel's slurry process was studied using a bench scale reactor 50 mm. + 6 m. to develop a process in which a large amount of CO produced from Linz-Donawitz converters in the steel industry might be utilized. **Synthesis gas** of CO/H mole ratio 1.5-2.0 was introduced as bubbles into a suspension of **iron** catalyst in oil at 230-70°, and 3-10 kg./cm.3, 2.5-3.5 l. (CO + H)/g. Fe/hr., and catalyst concentration 3-10 weight % as metallic **iron**; 10-45 g. gaseous **hydrocarbons** and 110-70 g. liquid **hydrocarbons** were produced from one m.3 **synthesis gas**. O-containing compds. were 5-6 weight % of total products. α-Olefin content was 82-71 weight % in the C6-C8 fraction and 80-77 weight % in the C11-C14 fraction. Gas measurements are at standard conditions.

=> s l15 not l16
L17 27 L15 NOT L16

=> d l17 ibib ab 1-27

L17 ANSWER 1 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:528001 CAPLUS
DOCUMENT NUMBER: 140:255299
TITLE: Liquid-phase **Fischer-Tropsch** process for the production of long-chain **hydrocarbons** from **synthesis gas**
INVENTOR(S): Koroleva, N. V.; Andriyanova, O. A.
PATENT ASSIGNEE(S): Russia
SOURCE: Russ., No pp. given
CODEN: RUXXE7
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RU 2205171	C1	20030527	RU 2001-127966	20011016

PRIORITY APPLN. INFO.: RU 2001-127966 20011016
AB This process involves the use of a fine, spherical catalyst containing 91-98% of cobalt or **iron oxides** and one or several cocatalysts selected from molybdenum, zirconium, potassium, and copper oxides in amts. of 2-9% at 200-350°, a H2-CO molar ratio of 1-3:1, resp., and a hydrogen pressure of 1-5 MPa. The catalyst is prepared by copptn. of metal **salts** and one or several promoters initiated by

adding 5-10% of a viscous organic phase to the aqueous solution

L17 ANSWER 2 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:284180 CAPLUS
DOCUMENT NUMBER: 138:257664
TITLE: **Iron**-copper-based **Fischer-Tropsch** catalysts for high yields of middle distillates
INVENTOR(S): Basu, Samiran; Chand, Nandi Gora; Basu, Satya Brata; Thattacharjee, Ujjal; Vatadahosahalli; Krishnamurthy, Aswathanaranappa; Haque, Rezaul
PATENT ASSIGNEE(S): Council of Scientific & Industrial Research, India
SOURCE: Indian, 17 pp.
CODEN: INXXAP
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
IN 175209	A	19950527	IN 1989-DE773	19890901

PRIORITY APPLN. INFO.: IN 1989-DE773 19890901

AB **Iron**-based **Fischer-Tropsch** catalysts for production of 62-69% yield of middle distillates (C≥5-**hydrocarbons**) from **synthesis gas** consist of Fe, Cu, and ≥1 of Mg, Mn, Al, Ca, and Th, and prepared from a 10-20 weight% solution of mixed nitrates of Fe 80.0-85.0, Cu 4.0-6.0, ≥1 of Mg, Mn, Ca, and Al, <10.0 to 13.0, and Th 0.1-0.5 weight%. The catalysts are prepared by: (1) dissolving the mixed nitrate solution (10-20 weight% **salts**) into distilled water, (2) heating the nitrate solution to 60-90°, (3) adding continuously to it a 20-40 weight% solution of Na2CO3 at 70-90° at a rate of 1 L per 7-10 min, until the resulting solution attains a pH of 8-9.5, (4) filtering and washing the precipitated mass until it is free of alkali metal and nitrate ions, (5) adding 1.25 wt,% K2CO3 solution, with mixing, and (6) transferring the resulting mass to a stainless steel tray to maintain a thickness of 30 mm. The catalyst mass is heated to .apprx.50° in air for 10 h, increasing the oven temperature to .apprx.80°for 20 h, cooling the catalyst to 30-35° and maintaining this temperature for 4 h. The catalyst is extruded, cooled, sized, and activated in H2 at 280-300° for 8-12 h and in **synthesis gas** at 150-250° for 36-48 h. Thus, the **Fischer-Tropsch** synthesis reaction was carried out at 220-260°, 10-20 kg/cm2, 1.5-1.8:1 H2-CO feed gas, and 350-650 h-1 space velocity, yielding C1-4-**hydrocarbons** 3.0, C≥5- **hydrocarbons** 85.0, and oxygenates 6.0%.

L17 ANSWER 3 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:185258 CAPLUS
DOCUMENT NUMBER: 136:219384
TITLE: **Fischer-tropsch** catalyst enhancement to produce **hydrocarbons**
INVENTOR(S): Krylova, Alla Jurievna; Lapidus, Albert L'vovich; Sineva, Lilia Vadimovna; Daage, Michael A.; Koveal, Russell John
PATENT ASSIGNEE(S): ExxonMobil Research and Engineering Company, USA
SOURCE: PCT Int. Appl., 22 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2002020700	A2	20020314	WO 2001-US24407	20010803
WO 2002020700	A3	20020530		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 6706661	B1	20040316	US 2000-653719	20000901
AU 2001081036	A5	20020322	AU 2001-81036	20010803
EP 1313557	A2	20030528	EP 2001-959484	20010803
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2003064885	A1	20030403	US 2002-285985	20021101
US 6716886	B2	20040406		

PRIORITY APPLN. INFO.: US 2000-653719 A 20000901
WO 2001-US24407 W 20010803

AB A process of enhancing both the activity and the methane selectivity of a Dispersed Active Metal (DAM) **hydrogenation** catalyst is disclosed in which the DAM undergoes low temperature oxidation in a slurry phase to form a stable, unique oxidized catalyst precursor that is subsequently reduced to form an enhanced catalyst by treatment with H-containing gas at elevated temperature, in which reducible promoter metals comprising ≥1 of Re, Ru, Pd, Fe and Co are added to the DAM. The promoter metals are mixed with the oxidized catalyst precursor as a solution of their reducible **salts**. The oxidized catalyst precursors are again recovered from the mixture and treated with H-containing gas to simultaneously form the metals and reactivate the DAM catalyst.

L17 ANSWER 4 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:144802 CAPLUS
DOCUMENT NUMBER: 132:168573
TITLE: **Fischer-Tropsch** processes using xerogel and aerogel catalysts by destabilizing aqueous colloids
INVENTOR(S): Manzer, Leo E.; Kourtakis, Konstantinos
PATENT ASSIGNEE(S): Conoco Inc., USA
SOURCE: PCT Int. Appl., 24 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000010704	A1	20000302	WO 1999-US18895	19990819
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6235677	B1	20010522	US 1999-377008	19990818
US 6319872	B1	20011120	US 1999-376873	19990818
CA 2341174	AA	20000302	CA 1999-2341174	19990819

AU 9955721	A1	20000314	AU 1999-55721	19990819
AU 746882	B2	20020502		
EP 1128905	A1	20010905	EP 1999-942315	19990819
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
ZA 2001001412	A	20010821	ZA 2001-1412	20010220
ZA 2001001413	A	20010821	ZA 2001-1413	20010220
US 2001007879	A1	20010712	US 2001-789987	20010221
US 6353035	B2	20020305		
US 2002052289	A1	20020502	US 2001-990812	20011116
US 6476085	B2	20021105		

PRIORITY APPLN. INFO.:	US 1998-97192P	P	19980820
	US 1998-97193P	P	19980820
	US 1998-97194P	P	19980820
	US 1999-376873	A	19990818
	US 1999-377007	A	19990818
	US 1999-377008	A	19990818
	WO 1999-US18895	W	19990819

AB A process is disclosed for producing **hydrocarbons** by contacting a feed stream comprising **hydrogen** and **carbon monoxide** with a catalyst in a reaction zone maintained at conversion-promoting conditions effective to produce an effluent stream comprising **hydrocarbons**. The process is characterized by using a catalyst prepared by a method involving (1) forming a catalyst gel by destabilizing an aqueous colloid comprising (a) at least one catalytic metal for **Fischer-Tropsch** reactions (e.g., **iron**, cobalt, nickel, and/or ruthenium), (b) colloidal cerium oxide, zirconium oxide, titanium oxide and/or aluminum oxide, and optionally (c) Al(OR)3, Si(OR)4, Ti(OR)4 and/or Zr(OR)4 where each R is an alkyl group having from 1 to 6 carbon atoms; and (2) drying the gel.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 5 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER:	1997:634913 CAPLUS
DOCUMENT NUMBER:	127:295630
TITLE:	**Fischer-Tropsch** synthesis catalysis
AUTHOR(S):	Dasandhi, Y. C.; Bandyopadhyay, P.
CORPORATE SOURCE:	Central Fuel Research Institute, Dhanbad, India
SOURCE:	CEW, Chemical Engineering World (1997), 32(1), 47-52 CODEN: CEWOAY; ISSN: 0009-2517
PUBLISHER:	Exhibition & Communication Enterprises (India)
DOCUMENT TYPE:	Journal
LANGUAGE:	English

AB F.T. reaction is an important tech. reaction for the conversion of **synthesis gas** to **hydrocarbons**. Because of the importance, the studies continue and are focused on improving catalysts. In this study, Indian **iron** ores viz, magnetite and hematite were used and their activities were compared with that of the conventional precipitated **iron** catalyst. The activity of the catalysts, particularly magnetite ore based, are comparable to that of the precipitated catalyst obtained from ferric nitrate **salt**.

L17 ANSWER 6 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER:	1990:37530 CAPLUS
DOCUMENT NUMBER:	112:37530
TITLE:	Zerovalent metal-polymer composites. III. Metalization of metal oxide surfaces with the aid of metalized functional polymer microdispersions
AUTHOR(S):	Warshawsky, A.; Upson, D. A.; Ferrar, W. T.; Monnier, J. R.
CORPORATE SOURCE:	Res. Lab., Eastman Kodak Co., Rochester, NY, 14650, USA

SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (1989), 27(9), 3015-41
CODEN: JPACEC; ISSN: 0887-624X
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The adsorption of poly[N-(m- and p-vinylbenzyl)-N,N,N-trimethylammonium tetrachloropalladate] complex on inorg. oxide surfaces followed by reduction of the Pd **salt** to form a catalytically active zerovalent metal polymer composite dispersed on the oxide surface and further deposition of transition metals, e.g., Ni, Co, and Cu by additive or subtractive deposition from electroless plating solns. is described. γ-Ferric oxide was used as a template for such intermetallic replacement reactions, providing materials with controlled amts. of metal. Multimetallic catalysts based on Al2O3, ZnO, La2O3, MgO, and silica were prepared **Iron oxide** modified by subtractive deposition of Rh and Ir on Ni-clad **iron oxide** were evaluated in **Fischer-Tropsch** carbonylation reactions leading from **synthesis gas** to alkanols.

L17 ANSWER 7 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1989:118114 CAPLUS
DOCUMENT NUMBER: 110:118114
TITLE: Manufacture of catalyst for **hydrogenation** of carbon monoxide to liquid **hydrocarbons**
INVENTOR(S): Udrea, Ion; Nicolescu, V. Ioan; Udrea, Mariana; Capat, Constantin; Musca, Gavril; Pop, Grigore
PATENT ASSIGNEE(S): Institutul de Cercetari Chimice "Icechim", Bucuresti, Rom.; Institutul de Energetica Chimica si Biochimica, Bucuresti
SOURCE: Rom., 3 pp.
CODEN: RUXXA3
DOCUMENT TYPE: Patent
LANGUAGE: Romanian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
RO 92598	B1	19870930	RO 1985-119738	19850802

PRIORITY APPLN. INFO.: RO 1985-119738 19850802

AB The **Fischer-Tropsch** catalyst is prepared by mixing of metal **salts** with bentonite in a semimoist state in the presence of (NH4)2CO3 or NH4HCO3 at pH 6.8-7.5, air drying at 60-110°, decomposition at 200-300°, grinding, extruding in a mixture with bentonite and water, drying at 60-110°, calcining at 300-400°, and thermally activating by **hydrogenation** with H at 200-400 or **synthesis gas** at 200-280°. The resulting catalyst has high activity at an Fe:Cu:K:bentonite weight ratio of 100:(5-20):(1-5):(80-120). The catalyst is suitable for manufacture of synthetic gasoline from **synthesis gas** having a H2/CO mol ratio of (1.2-1.8):1 at 260-300°, 10-20 atm, and space velocity 650-1100/h. Yield of the C5+ **hydrocarbons** is 120-150 g/m3 **synthesis gas**. Thus, a paste prepared by mixing of Fe(COO)2.2H2O 321, Cu(NO3)2.3H2O 76.04, K4[Fe(CN)6].3H2O 2.7-13.5 or K2CO3 1.77-8.83, NH4HCO3 60-70, bentonite 20-80 g, and distilled H2O 116-230 mL was air dried gradually for 3-6 h at 60, 80, and 110°, thermally decomposed 2-4 h at 200-300°, milled to a particle size ≤0.1 mm, extruded with 30-40 g bentonite + H2O, calcined 2-4 h at 300-400°, and activated 8-16 h by **synthesis gas** at 220-300°.

L17 ANSWER 8 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1986:594342 CAPLUS
DOCUMENT NUMBER: 105:194342

TITLE: Selective conversion of **synthesis gas**
INVENTOR(S): Dyer, Paul Nigel; Pierantozzi, Ronald
PATENT ASSIGNEE(S): Air Products and Chemicals, Inc., USA
SOURCE: Eur. Pat. Appl., 18 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 194552	A1	19860917	EP 1986-102802	19860304
R: BE, DE, FR, GB, IT, NL				
AU 8654224	A1	19861016	AU 1986-54224	19860303
ZA 8601682	A	19871125	ZA 1986-1682	19860306

PRIORITY APPLN. INFO.: US 1985-709157 19850307

AB **Synthesis gas** (CO-H ratio 0.9-1.6:1) is converted to **hydrocarbons** (especially C9-25 diesel fuels) by a **Fischer-Tropsch** process in which the feedstocks are contacted with an uncalcined **hydrogenation** catalyst at 200-280°, 150-500 psig, and 150-1000 h-1 gas space velocity (GHSV). The catalyst is preferably prepared by precipitation of an aqueous solution containing Fe(NO)3 and Cu(NO3)2 with an alkaline hydroxide, and the precipitate is filtered and washed prior to impregnation with an alkali metal **salt**. Thus, a CO-H (1.56:1 ratio) mixture was contacted with an uncalcined Fe-Cu-K **hydrogenation** catalyst at 239°, 305 psig, and 298 GHSV, resulting in 55.4% selectivity to C9-25 diesel fuels, compared with 17.3% for a conventional catalyst containing Fe2O3.

L17 ANSWER 9 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1986:500172 CAPLUS
DOCUMENT NUMBER: 105:100172
TITLE: Methanol to **hydrocarbon** conversion on ferrosilicates prepared from **iron**(2+) and **iron**(3+) sources
AUTHOR(S): Inui, Tomoyuki; Nagata, Hideo; Yamase, Osamu; Matsuda, Hirokazu; Kuroda, Toru; Yoshikawa, Masaaki; Takeguchi, Tatsuya; Miyamoto, Akira
CORPORATE SOURCE: Fac. Eng., Kyoto Univ., Kyoto, 606, Japan
SOURCE: Applied Catalysis (1986), 24(1-2), 257-71
CODEN: APCADI; ISSN: 0166-9834
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Ferrosilicate catalysts for MeOH [67-56-1]-to-**hydrocarbon** and **synthesis gas**-to-**hydrocarbon** reactions are sensitive to the oxidation number of the Fe and the Fe source used for their preparation, in the sense that their crystallinity and acidity, enhance their catalytic activities, are affected. The catalysts were prepared by a rapid-crystallization method. Almost all of the Fe(III) is incorporated into the catalysts when a ferric **salt** is the Fe source, but only 75% of Fe(II) when a ferrous **salt** is the source, although oxidation results in incorporation of Fe that is largely Fe(III). The ferrosilicates produced from Fe(II) have the higher crystallinities and stronger acidities and are more active in MeOH-to-**hydrocarbon** reactions and favor the formation of aroms. and gasoline; ferrosilicates prepared from Fe(III) produced more C2-4 olefins. In **synthesis gas**-to-**hydrocarbon** reactions, ferrosilicates prepared from Fe(II) produced aroms. more readily than those prepared from Fe(III).

L17 ANSWER 10 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1986:151252 CAPLUS
DOCUMENT NUMBER: 104:151252
TITLE: Manganese-spinel catalysts in C2-6 olefin synthesis from **carbon monoxide** and **hydrogen**
INVENTOR(S): Soled, Stuart Leon; Fiato, Rocco Anthony
PATENT ASSIGNEE(S): Exxon Research and Engineering Co. , USA
SOURCE: Brit. UK Pat. Appl., 10 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2152072	A1	19850731	GB 1984-32288	19841220
GB 2152072	B2	19871125		
CA 1236126	A1	19880503	CA 1984-470426	19841218
US 4670476	A	19870602	US 1986-817778	19860108

PRIORITY APPLN. INFO.: US 1983-564464 19831220

AB Catalysts for manufacture of C2-6 alkenes from **synthesis gas** (at 200-350°, 50-1000 psig, volume space velocity 200-4000 h-1, and H/CO ratio 0.5-2.5:1) consist of an unsupported single-phase Fe-Mn spinel isostructural with Fe3O4, of composition FexMnyO4 (x, y >0; x + y = 3; x/y = 2-19:1). The catalysts, which can be mixed with an inorg. diluent (e.g., powdered quartz, SiO2, kieselguhr, talc, borosilicate glass, zeolites, MgO), can be promoted with an alkali or alkaline earth metal **salt**. Thus, contacting 1:1 H/CO with Fe2MnO4 containing 1% K (as K2SO4) at 300°, 300 psig, and space velocity 1000 h-1 resulted in 46.3% overall CO conversion (55.3% to **hydrocarbons**), with 35.9% **hydrocarbon** selectivity to C2-6 alkenes.

L17 ANSWER 11 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1986:53397 CAPLUS
DOCUMENT NUMBER: 104:53397
TITLE: Catalyst and its use in conversion of **synthesis gas** to **hydrocarbons**
INVENTOR(S): Atkins, Martin Philip; Nay, Barry
PATENT ASSIGNEE(S): British Petroleum Co. PLC, UK
SOURCE: PCT Int. Appl., 22 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8504598	A1	19851024	WO 1985-GB143	19850402
W: AU, JP, NO, US				
AU 8542133	A1	19851101	AU 1985-42133	19850402
EP 162554	A1	19851127	EP 1985-302278	19850402
R: BE, DE, FR, GB, IT, NL				
JP 61501828	T2	19860828	JP 1985-501685	19850402
NO 8504820	A	19851129	NO 1985-4820	19851129

PRIORITY APPLN. INFO.: GB 1984-8803 19840405
GB 1984-23742 19840919
WO 1985-GB143 19850402

AB **Fischer-Tropsch** catalysts, for production of C5+ (gasoline-range) **hydrocarbons** with a low selectivity to CO2, are prepared by mixing a suitable (optionally water-soluble) **Fischer-Tropsch** active metal precursor (e.g., Fe, Ru, Co, or Ni) and a

promoter (alkali metal, alkaline earth metal, or rare earth metal, optionally containing a halide), with ≥1 hydrolyzable compound of Si, Al, Ga, Mg, Ca, P, Ti, Be, V, La, or Ce (preferably Si or Al), followed by hydrolysis to form a porous amorphous framework matrix containing uniformly distributed active metals and promoters. Thus, Si(OEt)4, Ru chloride, Fe(NO3)3, KOH, Al(NO3)3, and water were mixed and reacted to 70° to complete the reaction and then heated in an oven at 80-100° for 12 h to produce a brown glass-like solid catalyst of general formula Ru0.12Fe0.16K0.11 support6.8 (at SiO2-Al2O ratio 10:1). **Synthesis gas** (1:1) reacted at 294°, 20 bar, and 2330/h volume space velocity yielded molar selectivities of CH4 16.5, CO2 4.9, and C5+ liqs. 61.5%.

L17 ANSWER 12 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1985:615950 CAPLUS
DOCUMENT NUMBER: 103:215950
TITLE: Manganese-spinel catalysts for olefin synthesis from **carbon monoxide** and **hydrogen**
INVENTOR(S): Soled, Stuart Leon; Fiato, Rocco Anthony
PATENT ASSIGNEE(S): Exxon Research and Engineering Co. , USA
SOURCE: Brit. UK Pat. Appl., 12 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2151500	A1	19850724	GB 1984-32289	19841220
GB 2151500	B2	19880511		
US 4604375	A	19860805	US 1983-564465	19831220
CA 1225632	A1	19870818	CA 1984-470428	19841218

PRIORITY APPLN. INFO.: US 1983-564465 19831220

AB A catalysts is prepared which comprises a single-phase spinel FexMnyO4 (x and y = integer or decimal values other than 0, x + y = 3, x/y > 2) and exhibits a powder x-ray diffraction pattern substantially isostructural with Fe3O4. The catalyst is used with a Group IA or IIA metal **salt** as a promoter, for the conversion of a H-CO mixture to **hydrocarbons** with high selectivity to low-mol.-weight α-olefins. Thus, a mixture of Mn3O4, Fe2O3, and Fe powder was heated 24 h in vacuo at 800°, pulverized, pelletized, and sintered 24-48 h in vacuo at 800-1000° to give catalyst pellets which were isostructural with Fe3O4. The pellets were impregnated with K2CO3 or K2SO4, dried, and crushed. The catalyst (particle size 10-40 mesh) having the composition Fe2.25Mn0.75O4/1% K was pretreated with H at 500° for 5 h and then used at 305°/300 psig for the conversion of a CO-H mixture to **hydrocarbons**. The product contained CH4 9.6, ethylene [74-85-1] 8.6, propylene [115-07-1] 14.9, butene [25167-67-3] 10.2, pentene [25377-72-4] 6.0, C2-5 alkanes 7.0, and C6-20 olefins 20.1, compared with 19.0, 5.7, 15.9, 8.6, 5.0, 15.4, and 14.9, resp., when a catalyst having the composition Fe3O4/1% K was used.

L17 ANSWER 13 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1985:598391 CAPLUS
DOCUMENT NUMBER: 103:198391
TITLE: Modified silicalite catalysts and their use
INVENTOR(S): Desmond, Michael Joseph; Pepera, Marc Anthony
PATENT ASSIGNEE(S): Standard Oil Co., USA
SOURCE: Eur. Pat. Appl., 29 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 154063	A1	19850911	EP 1984-301345	19840301
R: DE, FR, GB, IT, NL				
JP 60197239	A2	19851005	JP 1984-53378	19840319

PRIORITY APPLN. INFO.: EP 1984-301345 19840301

AB **Synthesis gas** is hydrogenated to gasoline-type (i.e., aromatic) **hydrocarbons** by reaction over a catalyst mixture consisting of a **Fischer-Tropsch** catalyst and silicalite zeolite containing 0.01-20 weight% Group VIB and Group VIIB metals at a (0.1-10):1 silicalite-**Fischer-Tropsch** catalyst weight ratio. A preferred composition is a 1:1 weight ratio mixture of silicalite (containing 3 weight% Cr) and a **Fischer-Tropsch** catalysts consisting of 75:25:20 Fe(II):Fe(III):Cu(II) **salts**. Preferred reaction conditions are 1:1 H-CO mixture, 250°, 1.04 MPa, and gas space velocity 300/h.

L17 ANSWER 14 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1983:525162 CAPLUS
DOCUMENT NUMBER: 99:125162
TITLE: The role of metal-zeolite interactions in indirect liquefaction catalysis
AUTHOR(S): Rao, V. U. S.
CORPORATE SOURCE: Pittsburgh Energy Technol. Cent., U. S. Dep. Energy, Pittsburgh, PA, 15236, USA
SOURCE: Physica Scripta (1983), T4, 71-8
CODEN: PHSTBO; ISSN: 0031-8949
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The conversion of **synthesis gas** to gasoline range (C5-C11) **hydrocarbons** can be performed with bifunctional catalysts containing medium-pore ZSM-5 zeolite and a Group VIII element such as Fe or Co. For Fe-ZSM-5, the catalytic behavior of prepns. by impregnation with (a) metal nitrate **salts** and (b) $Fe_3(CO)_{12}$ were compared. The carbonyl-impregnated sample in the as-prepared form contained γ-Fe_2O_3 of average particle diameter .apprx.60 Å, as evidenced by superparamagnetic behavior in magnetic and Moessbauer studies. In contrast, the as-prepared nitrate-impregnated sample showed α-Fe_2O_3 with particle size >100 Å. Both catalysts were .apprx.80% reduced to metallic form in flowing H. The carbonyl-impregnated sample exhibited very steady catalytic activity and selectivity to liquid **hydrocarbons**, which could be related to the high metal dispersion. Co-ZSM-5 and Co-ThO_2-ZSM-5 were examined in **synthesis gas** conversion. ThO_2 was a promoter and increased gasoline **hydrocarbon** yields to 70%. XPS, magnetic, and x-ray line broadening studies showed that in the reduced catalyst (active state), Co was predominantly in zero valent or metallic form with 200 Å particle diameter, whereas Th was in +4 valence state. IR studies on adsorbed pyridine showed that Co-ZSM-5 catalysts prepared by nitrate solution impregnation contain significantly decreased Broensted acidity with concomitant increase in Lewis acidity. Nearly 1.4% Co in the nitrate-impregnated catalysts appeared to be in ion-exchanged form within the pores, and was not reducible in H at ≤450°. NH_3 adsorption studies show that metal impregnation eliminates some of the strong acid sites but nearly doubles the amount of NH_3 adsorbed. The information obtained from magnetic and spectroscopic studies regarding the interaction of the metal component with the zeolite is related to the catalytic activity of the bifunctional catalysts. In particular, methods of identifying metal species within and outside the zeolite pores are discussed.

L17 ANSWER 15 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1981:142569 CAPLUS

DOCUMENT NUMBER: 94:142569
TITLE: **Fischer-Tropsch** catalysts and their use
INVENTOR(S): Boersma, Michael Adriaan Maria
PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V., Neth.
SOURCE: Ger. Offen., 16 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3026390	A1	19810129	DE 1980-3026390	19800711
DE 3026390	C2	19891102		
NL 7905480	A	19810115	NL 1979-5480	19790713
NL 190574	B	19931201		
NL 190574	C	19940502		
CA 1143713	A1	19830329	CA 1980-350342	19800422
BE 884143	A2	19810105	BE 1980-9878	19800703
AU 8060343	A1	19810115	AU 1980-60343	19800711
AU 535352	B2	19840315		
FR 2460711	A1	19810130	FR 1980-15466	19800711
FR 2460711	B1	19860801		
GB 2053713	A	19810211	GB 1980-22790	19800711
GB 2053713	B2	19830420		
JP 56021647	A2	19810228	JP 1980-94054	19800711
JP 63052936	B4	19881020		
ZA 8004187	A	19810729	ZA 1980-4187	19800711

PRIORITY APPLN. INFO.: NL 1979-5480 19790713

AB An Al2O3 support is impregnated with an aqueous solution of Fe and Mg **salts** to obtain 40-60 Fe and 7.5-30 weight parts Mg/100 weight parts Al2O3. Sometimes, a Cu **salt** and a K **salt** are added to obtain 0.5-5 Cu reduction promoter and 1-5 weight parts selectivity promoter/100 parts Al2O3. After impregnation, the catalyst is dried, calcined at 700-1200°, and reduced in a H-containing gas at 250-350°. The catalyst is used for the **Fischer-Tropsch** synthesis of **hydrocarbons** from a H-CO mixture having a H-CO mole ratio <1:1 at 250-350°, 20-50 bars, and space velocity 500-2500 L gas/L catalyst-h. Thus, an Al2O3 substrate was impregnated with Mg(NO3)2, dried at 120°, calcined 2 h at 400°, impregnated with aqueous Fe(NO3)3, Cu(NO3)2, and KNO3, dried at 120°, calcined 16 h at 800°, and reduced at 325°. The resulting catalyst contained Fe 50, Mg 20, Cu 2.5, K 4, and Al2O3 100 weight parts. The catalyst was used for production of **hydrocarbons** from a **synthesis gas** having a H-CO ratio of 0.6:1 at 280°, 30 bars, and space velocity of 1000 L/L-h. The conversion after 25 h was 93%. During further service for total 3150 h, temperature was gradually increased to 305°, space velocity was decreased to 350 L/L-h, and conversion was decreased to 80%.

L17 ANSWER 16 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1981:142568 CAPLUS
DOCUMENT NUMBER: 94:142568
TITLE: **Fischer-Tropsch** catalysts and their use
INVENTOR(S): Boersma, Michael Adriaan Maria; Schaper, Lambert
PATENT ASSIGNEE(S): Shell Internationale Research Maatschappij B. V., Neth.
SOURCE: Ger. Offen., 13 pp.
CODEN: GWXXBX

DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3026175	A1	19810129	DE 1980-3026175	19800710
DE 3026175	C2	19900927		
NL 7905479	A	19810115	NL 1979-5479	19790713
NL 190603	B	19931216		
NL 190603	C	19940516		
CA 1140909	A1	19830208	CA 1980-350343	19800422
BE 884144	A2	19810105	BE 1980-9879	19800703
AU 8060297	A1	19810115	AU 1980-60297	19800710
AU 538927	B2	19840906		
FR 2460712	A1	19810130	FR 1980-15376	19800710
FR 2460712	B1	19830218		
GB 2053016	A	19810204	GB 1980-22651	19800710
GB 2053016	B2	19830413		
JP 56021648	A2	19810228	JP 1980-93390	19800710
JP 63052937	B4	19881020		
ZA 8004155	A	19810729	ZA 1980-4155	19800710

PRIORITY APPLN. INFO.: NL 1979-5479 19790713

AB A SiO2 catalyst support is impregnated with an organic solution of Fe and Cr **salts** to obtain 20-35 Fe and 0.5-5 weight parts Cr/100 weight parts SiO2. Optionally, a K **salt** is added to obtain 1-5 weight parts K promoter/100 parts SiO2. After impregnation, the catalyst is dried, calcined at 350-700°, and reduced in a H-containing gas at 350-500°. The resulting catalyst is used for the **Fischer -Tropsch** synthesis of **hydrocarbons** from a H-CO mixture having a H/CO mole ratio <1 at 250-350°, 20-50 bars, and space velocity 500-2500 L gas/L catalyst-h. Thus, a SiO2 substrate was impregnated with a KNO3 solution, dried at 1250°, calcined 2 h at 400°, impregnated with an organic solution containing Fe (NO3)3 and Cr(NO3)3, dried at 1250°, calcined 2 h at 500°, and reduced at 400°. The resulting catalyst contained Fe 25, Cr 1, K 2, and SiO2 100 weight parts. The catalyst was used for production of **hydrocarbons** from a **synthesis gas** having a H/CO ratio of 0.5:1 at 280°, 30 bars, and space velocity of 1000 L/L-h. The conversion after 25 and 500 h was 91 and 90%, resp. To maintain the conversion of 90% for another 500 h, the temperature was gradually increased to 290°.

L17 ANSWER 17 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1961:114571 CAPLUS
DOCUMENT NUMBER: 55:114571
ORIGINAL REFERENCE NO.: 55:21549g-i
TITLE: Multistep operation of **iron** catalysts for carbon monoxide **hydrogenation**
INVENTOR(S): Kolbel, Herbert; Langheim, Robert
PATENT ASSIGNEE(S): Rheinpreussen Akt.-Ges. fur Bergbau und Chemie
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 973378		19600204	DE	

AB The fresh Fe catalyst is first operated 1-5 days in the 1st step with fresh **synthesis gas** and then used in the subsequent reactors. The procedure gives lower **hydrogenation** temps. or higher activity of the catalyst. Thus, an Fe **salt** solution was precipitated with dolomite and Na2CO3 and heated at 300° in an atmospheric containing

90% N and 10% CO. Three reactors were filled each with 84 g. catalyst. The reactors were operated at 202° and 10 atmospheric with 6 times the normal amount of CO and H (1:2) (normal charge 4 l./hr./10 g. Fe). The liquid products were removed under pressure after each step. During 14 days, the reaction temperature was raised to 205, 215, and 218° in the 1st, 2nd, and 3rd step, resp. A yield of 155-60 g. **hydrocarbons** containing ≥2 C atoms was obtained per cu. m. **synthesis gas**, if all reactors were operated initially with fresh gas at 202° and 10 atmospheric for 48 hrs., and then used in the 2nd or 3rd step; the temperature was raised only at 204-6° in 14 days to give the above yield. The temps. remained constant for several months.

L17 ANSWER 18 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1955:41119 CAPLUS
DOCUMENT NUMBER: 49:41119
ORIGINAL REFERENCE NO.: 49:7845h-i
TITLE: **Hydrocarbon** synthesis
INVENTOR(S): Black, James F.; Kearby, Kenneth K.
PATENT ASSIGNEE(S): Standard Oil Development Co.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2682552		19540629	US	

AB To prevent sintering and agglomeration of Fe-type catalysts in fluidized-bed operations, the Fe oxide is supported on a diffcultly reducible metal oxide. This catalyst can be a mixture of Fe_2O_3 with Al_2O_3, SiO_2, MgO, TiO_2, Cr_2O_3, MnO, ZnO, or preferably a natural product containing Fe and one of the above metals. Such products are high-Fe bauxite (especially for fluid-type **hydrocarbon** synthesis), green sand, ilmenite (Fe titanate, especially for **synthesis-gas** production), Fe silicates, etc., with or without an alkali metal **salt** as promoter or B_2O_3 or $N_2B_4O_7$ as a flux; these substances have excellent flow properties as high as 1700°F., while ordinary Fe_2O_3 loses fluidity at 1050°F.

L17 ANSWER 19 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1955:21842 CAPLUS
DOCUMENT NUMBER: 49:21842
ORIGINAL REFERENCE NO.: 49:4266f-h
TITLE: Catalytic **hydrogenation** of carbon monoxide
INVENTOR(S): Rottig, Walter
PATENT ASSIGNEE(S): Ruhrchemie A.-G.; Lurgi Gesellschaft fur Warmetechnik m. b. H.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 712686		19540728	GB	

AB CO is hydrogenated to yield a product with a high ester content by contact at 190-220° and 20-30 kg./sq. cm. with a precipitated Fe catalyst which contains 2-5 weight % K_2O in the form of the halogen-free K **salt** of phosphoric, boric, tungstic, or molybdic acid. More than 60% of the Fe is in the metallic state. **Synthesis gas** rich in CO is used. For example, a catalyst containing 100 parts Fe and 5 parts Cu was prepared by precipitation with Na_2CO_3 from a hot nitrate solution and impregnation with KH_2PO_4 to give 7.9 parts K as K_2O. Treatment with a 3:1 H-N mixture reduced

62% of the Fe to the metal. Water gas was passed over the catalyst at 205° 10 kg./sq. cm., and 100 l. gas/l. catalyst/hr. to convert 61% of the CO and H and form 4.9% CH4. The liquid synthesis products, 57% of which had b.ps. >320°, contained 17% esters, 23% alcs., and 4% other O-containing compds.

L17 ANSWER 20 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1953:33455 CAPLUS
DOCUMENT NUMBER: 47:33455
ORIGINAL REFERENCE NO.: 47:5666b-d
TITLE: **Iron Fischer-Tropsch** catalysts
INVENTOR(S): Rottig, Walter
PATENT ASSIGNEE(S): Ruhrchemie A.-G.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2620347		19521202	US	

AB Fe catalysts last longer and permit increased yields of higher **hydrocarbons**, with decreased CH4 yields, in the catalytic **hydrogenation** of CO if they are impregnated with K **salts** of non volatile, inorg. acids, reduced with H, and alternately brought into contact with **synthesis gas** and extracted with **hydrocarbon** solvents. Thus, a catalyst containing Fe 100, Cu 5, and CaO 10 parts by weight, prepared by NaOH precipitation of a solution of the nitrates, washing, drying, impregnating with K silicate to give an equivalent of 5% KOH (based on the weight of Fe), and reducing with H at 225° for 1 hr., is extracted with Diesel oil (b. 220-300°) after each of 5 periods of contact with water gas for 96-160 hrs. at 160-95°. A similar catalyst consists of Fe 100, Cu 3, and K(PO4)3, equivalent to 3% K2O and based on the weight of Fe.

L17 ANSWER 21 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1951:51285 CAPLUS
DOCUMENT NUMBER: 45:51285
ORIGINAL REFERENCE NO.: 45:8742b-f
TITLE: **Hydrocarbon** synthesis
INVENTOR(S): Baker, Harold T.
PATENT ASSIGNEE(S): Standard Oil Development Co.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2560325		19510710	US	

AB In the synthesis of **hydrocarbons** and oxygenated **hydrocarbons** from CO and H by the **Fischer-Tropsch** process in the presence of a powdered Fe catalyst promoted with an alkali-metal **salt**, the catalyst is maintained in an active condition by use of a 3-stage process which comprises: (1) interrupting the flow of **synthesis gas** to the reactor about every 24 hrs.; (2) treating the fluidized bed of catalyst with a gas consisting predominantly of H, under substantially the same conditions of temperature and pressure prevailing during the synthesis reaction, 343° and 650 lb./sq. in. gage, for 15 min. to 2 hrs. and until the effluent gas is at least 90% H; and (3) passing **synthesis gas** into the reactor maintained under synthesis conditions of temperature and pressure.

Under these conditions over 20% of the catalyst is converted to Fe2C, and the O content is reduced below 15% by weight In an example, a batch of powdered magnetite Fe catalyst, containing a minor proportion of K2CO3, was reduced for 5 hrs. at 343° and 400 lb./sq. in. gage at a total H ratio of 50 volume H at standard conditions/hr./lb. of catalyst in the reactor. The O content of the catalyst was only reduced from 26.1 to 24.5% by weight When the reduction was continued for 10 hrs. more using H from which traces of CO had been removed, the O content of the catalyst was only reduced to 21.6% by weight When the flow of **synthesis gas** to the reactor was frequently interrupted by switching to H, the proportion of Fe present as Fe2C was maintained in the approx. range of 20-30%, and there was no significant build-up of O on the catalyst, but its concentration remained in the approx. range of 10-11%. Without intermittent switching to H, the O content of the catalyst increased to 18.2% in 137 hrs. and the proportion of Fe as Fe2C decreased from 40 to 80%.

L17 ANSWER 22 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1950:8668 CAPLUS
DOCUMENT NUMBER: 44:8668
ORIGINAL REFERENCE NO.: 44:1673g-i
TITLE: Two-stage process for the synthesis of **hydrocarbons**
INVENTOR(S): Holder, Clinton H.
PATENT ASSIGNEE(S): Standard Oil Development Co.
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2483771		19491004	US	

AB Liquid **hydrocarbons** are produced by means of bringing the **synthesis gas** mixture of CO and H2 into contact with a dense bed of fluidized alkali metal **salt** promoted Fe synthesis catalyst. The product stream containing partially spent very fine catalyst particles is scrubbed with a high-boiling **hydrocarbon** oil. The catalyst particle slurry thus formed is introduced into a second reaction zone where a **synthesis gas** containing 3 to 7 parts of H to 1 part CO is brought into contact with the slurry at a pressure between 300 and 750 lb./sq. in. at a temperature of 350-500°F. to produce a product containing a substantial amount of high-melting wax.

L17 ANSWER 23 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1949:3575 CAPLUS
DOCUMENT NUMBER: 43:3575
ORIGINAL REFERENCE NO.: 43:827a-c
TITLE: Catalyst for **hydrocarbon** synthesis
INVENTOR(S): Hawk, Charles O.; Stern, Norma R.; Hofer, Lawrence J. E.
PATENT ASSIGNEE(S): United States of America, as represented by the Secy. of the Interior
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2449071		19480914	US	

AB A catalyst for the synthesis of liquid and solid **hydrocarbons** from H and CO is prepared by copptg. a mixture of hydrated ortho- and

metaferric oxides (5-25% by weight meta, the rest ortho) from a solution containing
1.0-2.5 mols. of a ferric **salt** per 100 mols. of H2O by adding thereto an aqueous solution of an alkali metal hydroxide, carbonate, or bicarbonate over a period of 15-45 min. at 70-85°. Thus, a catalyst, prepared by treating Fe(NO3)3 and K2CO3 and washing the precipitate, then
drying, pelleting, and reducing with H, was used on a 1:1 gas mixture of H and CO at a pressure of 100 lb./sq. in. at 250° and a N.T.P. space velocity of 150-200. The yield of **hydrocarbons** heavier than butane averaged 60 g. per cu. m. of **synthesis gas** (N.T.P.).

L17 ANSWER 24 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1947:17908 CAPLUS
DOCUMENT NUMBER: 41:17908
ORIGINAL REFERENCE NO.: 41:3603e-f,3604a-b
TITLE: **Hydrocarbons** from **carbon monoxide** and **hydrogen**
PATENT ASSIGNEE(S): N. V. Internationale Koolwaterstoffen Synthese Maatschappij (International Hydrocarbon Synthesis Co.)
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 55196		19430915	NL	

AB Catalyzers are prepared from a solution containing Fe and Ni **salts** by precipitating gradually at 40° or less and pH not under 8 while the solution is added to the precipitating liquid. The precipitate is then reduced. In an example 9
l. of a solution in water of 725 g. Fe (NO3)3.9H2O and 480 g. Ni(NO3)2.6H2O, and 268 g. Al(NO3)3.9H2O is trickled in 48 hrs. into 9 l. aqueous solution of 1010 g. K2CO3. The liquid and precipitate are boiled for 5 min., filtered, washed with water, and dried in air at 110°. Then 50 cc. unreduced catalyzer, containing 5.6 g. Fe and Ni is reduced by H during 5 hrs. at 350°. This catalyzer loses only 10% activity in 6 weeks. Precipitating in the inverse way or quickly gives much heavier catalyzers, of which more is needed to fill the same reacting volume

L17 ANSWER 25 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1947:16142 CAPLUS
DOCUMENT NUMBER: 41:16142
ORIGINAL REFERENCE NO.: 41:3280b-d
TITLE: **Hydrocarbons** from carbon monoxide by **hydrogenation** with a catalyst
PATENT ASSIGNEE(S): N. V. Internationale Koolwaterstoffen Synthese Maatschappij (International Hydrocarbon Synthesis Co.)
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 55360		19431015	NL	

AB The catalyst is prepared by precipitating a solution of Fe and Ca **salts** with alkali hydroxide; the Ca content, calculated as CaO or Ca(OH)2, is at least 5% of the Fe content, e.g., Fe 259 in form of Fe(NO3)3.9H2O and CaO 10 g. as Ca(NO3)2 were dissolved in 600 g. H2O and heated to boiling. To this solution is added 425 cc. 40% NaOH (sp. gr. 1.438) at 50° at least. After stirring and filtering, the residue was washed twice with 350 cc.

water at 80-90° until the nitrate content was under 1.5%. The hydroxides were dried and reduced with the **synthesis gas** or with H. They can be impregnated with alkali solution, and 2-5% Cu or Ni may be added.

L17 ANSWER 26 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1944:6531 CAPLUS
DOCUMENT NUMBER: 38:6531
ORIGINAL REFERENCE NO.: 38:949f-i,950f
TITLE: Review of the syntheses using CO and H
AUTHOR(S): Fischer, Franz
SOURCE: Oel u. Kohle in Gemeinschaft mit Brennstoff-Chem. (1943), 39, 517-22
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB The catalysts for the **hydrocarbon** synthesis at normal pressure and about 190° are Ni, Co and Fe which are probably active in the form of carbides formed during the process. Solid paraffins are the main product of the medium-pressure **hydrocarbon** synthesis with Co as catalyst and operating at about 10 atmospheric and a temperature slightly below that of the normal-pressure process. Ni cannot be used in this case because of the formation of Ni(CO)4 under these conditions. A specially prepared Fe catalyst can be employed for the medium-pressure process but the reaction temperature must then be raised to 240° and a gas mixture containing more CO than the usual **synthesis gas** (1CO:2H2) is required because part of the CO is oxidized to CO2. The yield of solid paraffins is decreased with the Fe catalyst but more O-containing compds. are formed with increasing pressure unless the catalyst can be kept in the form of the metal rather than the oxide. With Ru at 200 atmospheric and 200° hitherto unknown solid paraffins, m. 134°, are formed which are exceedingly useful in high-frequency elec. apparatus or as substitutes for ceresin and carnauba wax. It is briefly mentioned that in 1941 a process was developed for the direct synthesis of isoparaffins; the C4 fraction of the gasoline produced contains 90% isobutane. A catalytic process for the isomerization of butane and pentane to the corresponding iso compds. and of hexane to neohexane is reported. The syntheses of MeOH and other O-containing organic compds. are reviewed, including that of iso-BuOH (yield 25%, ZnO catalyst alkalized with alkali **salts** of organic acids, 300-400 atmospheric, 400-500°). Equilibrium consts. at 7°, 127° and 227° and 1, 100, 1000 and 10,000 atmospheric are given for the formation of HCHO from CO and H. The possibility of direct formation of fat acids from CO and H is indicated.

L17 ANSWER 27 OF 27 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1943:7391 CAPLUS
DOCUMENT NUMBER: 37:7391
ORIGINAL REFERENCE NO.: 37:1246i,1247a
TITLE: Synthesis of **hydrocarbons** from **carbon monoxide** and **hydrogen**
INVENTOR(S): Scheuermann, Arno; Marecek, Eugen
PATENT ASSIGNEE(S): Alien Property Custodian
DOCUMENT TYPE: Patent
LANGUAGE: Unavailable
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2296405		19420922	US	

AB Use is made of a catalyst containing Fe and Ni, prepared by slowly precipitated reducible Fe and Ni compds., as by use of a K2CO3 solution, from a solution of **salts** of the metals, at a temperature below 40° and in a solution

the pH of which is maintained at not less than 8 during the precipitation Ag and Al2O3 may be conjointly used.

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	DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ		
☐	L8	L7 and fischer tropsch	0
☐	L7	iron oxide with mix$3 with sodium chloride	29
☐	L6	crushed iron and crushed sodium chloride	0
☐	L5	L4 and fischer tropsch	0
☐	L4	iron same alkali halid$1	115
☐	L3	iron with sodium chloride and fischer tropsch	4
	DB=PGPB,USPT; THES=ASSIGNEE; PLUR=YES; OP=ADJ		
☐	L2	iron with sodium chloride and fischer tropsch	2
	DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ		
☐	L1	iron-salt catalyst and fischer tropsch	0

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NEWS	4	JAN 27	A new search aid, the Company Name Thesaurus, available in CA/CAplus
NEWS	5	FEB 05	German (DE) application and patent publication number format changes
NEWS	6	MAR 03	MEDLINE and LMEDLINE reloaded
NEWS	7	MAR 03	MEDLINE file segment of TOXCENTER reloaded
NEWS	8	MAR 03	FRANCEPAT now available on STN
NEWS	9	MAR 29	Pharmaceutical Substances (PS) now available on STN
NEWS	10	MAR 29	WPIFV now available on STN
NEWS	11	MAR 29	New monthly current-awareness alert (SDI) frequency in RAPRA
NEWS	12	APR 26	PROMT: New display field available
NEWS	13	APR 26	IFIPAT/IFIUDB/IFICDB: New super search and display field available
NEWS	14	APR 26	LITALERT now available on STN
NEWS	15	APR 27	NLDB: New search and display fields available
NEWS	16	May 10	PROUSDDR now available on STN
NEWS	17	May 19	PROUSDDR: One FREE connect hour, per account, in both May and June 2004
NEWS	18	May 12	EXTEND option available in structure searching
NEWS	19	May 12	Polymer links for the POLYLINK command completed in REGISTRY

NEWS EXPRESS	MARCH 31 CURRENT WINDOWS VERSION IS V7.00A, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 26 APRIL 2004
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  This file contains CAS Registry Numbers for easy and accurate
  substance identification.

=> s iron (l) (sodium chloride or NaCl)
        883721 IRON
         11100 IRONS
        884489 IRON
                 (IRON OR IRONS)
        929114 SODIUM
            34 SODIUMS
        929123 SODIUM
                 (SODIUM OR SODIUMS)
        987885 CHLORIDE
        148490 CHLORIDES
       1055471 CHLORIDE
                 (CHLORIDE OR CHLORIDES)
        111516 SODIUM CHLORIDE
                 (SODIUM(W)CHLORIDE)
        255110 NACL
             2 NACLS
        255111 NACL
                 (NACL OR NACLS)
L1        4354 IRON (L) (SODIUM CHLORIDE OR NACL)

=> s l1 and synthesis gas or (hydrogen (1a) carbon monoxide)
       1120506 SYNTHESIS
             3 SYNTHESISES
         61622 SYNTHESES
       1155482 SYNTHESIS
                 (SYNTHESIS OR SYNTHESISES OR SYNTHESES)
       1357367 GAS
        468297 GASES
       1525567 GAS
                 (GAS OR GASES)
         14406 SYNTHESIS GAS
                 (SYNTHESIS(W)GAS)
        819312 HYDROGEN
          5358 HYDROGENS
        822323 HYDROGEN
                 (HYDROGEN OR HYDROGENS)
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       1054434 CARBON
         23482 CARBONS
       1062994 CARBON
                 (CARBON OR CARBONS)
        158362 MONOXIDE
           955 MONOXIDES
        158869 MONOXIDE
                 (MONOXIDE OR MONOXIDES)
        133822 CARBON MONOXIDE
                 (CARBON(W)MONOXIDE)
          9260 HYDROGEN (1A) CARBON MONOXIDE
L2        9260 L1 AND SYNTHESIS GAS OR (HYDROGEN (1A) CARBON MONOXIDE)

=> s l1 and (synthesis gas or (hydrogen (1a) carbon monoxide))
       1120506 SYNTHESIS
             3 SYNTHESISES
         61622 SYNTHESES
       1155482 SYNTHESIS
                 (SYNTHESIS OR SYNTHESISES OR SYNTHESES)
       1357367 GAS
        468297 GASES
       1525567 GAS
                 (GAS OR GASES)
         14406 SYNTHESIS GAS
                 (SYNTHESIS(W)GAS)
        819312 HYDROGEN
          5358 HYDROGENS
        822323 HYDROGEN
                 (HYDROGEN OR HYDROGENS)
       1054434 CARBON
         23482 CARBONS
       1062994 CARBON
                 (CARBON OR CARBONS)
        158362 MONOXIDE
           955 MONOXIDES
        158869 MONOXIDE
                 (MONOXIDE OR MONOXIDES)
        133822 CARBON MONOXIDE
                 (CARBON(W)MONOXIDE)
          9260 HYDROGEN (1A) CARBON MONOXIDE
L3           1 L1 AND (SYNTHESIS GAS OR (HYDROGEN (1A) CARBON MONOXIDE))

=> d l3 ibib ab

L3   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:        2002:615041  CAPLUS
TITLE:                   Modification of the properties of graphite nanofibers
                         by a NaCl structural promoter
AUTHOR(S):               Marotta, Christopher L.; Rodriguez, Nelly M.; Baker,
                         R. T. K.
CORPORATE SOURCE:        Department of Chemistry, Northeastern University,
                         Boston, MA, 02115, USA
SOURCE:                  Abstracts of Papers, 224th ACS National Meeting,
                         Boston, MA, United States, August 18-22, 2002 (2002),
                         COLL-052.  American Chemical Society: Washington, D.
                         C.
                         CODEN: 69CZPZ
DOCUMENT TYPE:           Conference; Meeting Abstract
LANGUAGE:                English
AB   GNF are graphene nanostructures synthesized from the catalytic decomposition of
     carbon containing gases over metals such as iron, nickel, and
     cobalt.  These materials are currently receiving much attention for their
     potential applications in electronic devices, polymer additives, gas
     storage, and catalyst supports.  In this study, we have synthesized
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nanofibers in a **carbon monoxide** and **hydrogen** environment using an **iron**-based catalyst doped with **NaCl** . Differences in feed gas ratios, temperature, and **NaCl** loading were examined using TEM, electron and x-ray diffraction, BET nitrogen absorption, and gas chromatog. Dramatic changes in the surface areas, pore size distributions, and the structure of the fibers have been realized upon the addition of the salt. Past research has demonstrated that the incorporation of adatoms such as sodium can interact strongly with metal surfaces and may indeed obstruct or alter active sites leading to changes in activity and selectivity. It is believed that an epitaxial interaction of the salt with the **iron** has changed the crystallog. orientation of the metal catalyst surface. This feature results in a modification of the precipitation step and thus the structure of the fibers.

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=> d his

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     FILE 'CAPLUS' ENTERED AT 17:30:26 ON 15 MAY 2004
L1          4354 S IRON (L) (SODIUM CHLORIDE OR NACL)
L2          9260 S L1 AND SYNTHESIS GAS OR (HYDROGEN (1A) CARBON MONOXIDE)
L3             1 S L1 AND (SYNTHESIS GAS OR (HYDROGEN (1A) CARBON MONOXIDE))

=> s l1 and fischer tropsch
         21547 FISCHER
            15 FISCHERS
         21559 FISCHER
                 (FISCHER OR FISCHERS)
          6878 TROPSCH
          6785 FISCHER TROPSCH
                 (FISCHER(W)TROPSCH)
L4            2 L1 AND FISCHER TROPSCH

=> d l4 ibib ab 1-2

L4   ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         1983:222536  CAPLUS
DOCUMENT NUMBER:          98:222536
TITLE:                    Modification of iron species in FeNaY
                          zeolite by sodium chloride
                          treatment
AUTHOR(S):                Novakova, J.; Kubelkova, L.; Dolejsek, Z.;
                          Wichterlova, B.; Kolihova, D.; Andera, V.
CORPORATE SOURCE:         J. Heyrovsky Inst. Phys. Chem. Electrochem., Prague,
                          121 38, Czech.
SOURCE:                   Reaction Kinetics and Catalysis Letters (1982), 21(3),
                          273-6
                          CODEN: RKCLAU; ISSN: 0304-4122
DOCUMENT TYPE:            Journal
LANGUAGE:                 English
AB   The treatment of Fe(III)NaY zeolite catalysts for Fischer-
     Tropsch synthesis with NaCl solution does not lead to a back-exchange
     of Fe3+ species but the cationic Fe rearranges into new complexes which
     are more deeply reduced by H and less self-reduced by vacuum heat
     treatment than the parent Fe species in FeNaY zeolite.

L4   ANSWER 2 OF 2  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         1951:31808  CAPLUS
DOCUMENT NUMBER:          45:31808
ORIGINAL REFERENCE NO.:   45:5502f-i
TITLE:                    The Kubierschky principle and reactions between
                          pulverized solids and gases or vapors
AUTHOR(S):                Jeanprost, Charles
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SOURCE: Chimie et Industrie (Paris) (1951), 65, 191-9,339-47
CODEN: CHIEAN; ISSN: 0009-4358
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB The prolonged separation into 2 layers of 2 gases or vapors of different d., individually introduced into a container, is the principle stated by Kubierschky (C.A. 2, 3295) and now applied to a method for contacting reacting solids and gases. A vertical column is divided into a number of compartments by perforated plates or screens. The pulverized solid is fed into the top and, passing through the screens, falls by gravity from one compartment to the next. The reacting gas enters the bottom of the column, moves through vertical passageways to the top of the 1st compartment and then, in contact with the falling solids, passes downward to the bottom of the compartment, where the gas enters another passageway, moves to the next upper compartment and, thence, through the entire column. The application of the K. principle is the displacement of heavier gases or vapors, resulting from reaction with the solids, from the bottom of each compartment by lighter gases entering at the top. Reaction times and rates of fall of the solids are discussed. Calculated heat balances are given and operations discussed for production of sponge **iron**, metallurgical coke and lime, SO3, hydrocarbons by the **Fischer-Tropsch** process, P2O5 from phosphorite, activated C, and 2Na2O.3SiO2 from SiO2, **NaCl**, and C.